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THE

SURGICAL TREATMENT

—OF—

CANCER OF THE RECTUM.

BY

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REPRINTED FROM THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, OCTOBER, 1880.

CANCER OF THE RECTUM.

The treatment of malignant disease of the rectum is designed to be either curative or palliative. In a small number of selected cases a cure is perhaps possible, as with cancer of feeble malignancy in other parts of the body, *e. g.* epithelioma of the lip. At all events, the disease may be removed and its return delayed for many years. This fact, we believe, may be accepted as proved by a sufficient number of carefully examined cases from which the chances of error in diagnosis and subsequent history have been eliminated. Cure can, however, only be effected by excision. All other means may be set aside as hopeless failures.

The operation of excision, which after being fully described and ably advocated by Lisfranc in 1830 was allowed to fall into disuse, has again within the past few years become popular. It would probably be a waste of time to inquire to whom the credit of reviving it is due. Cases of its occasional performance are scattered through the surgical literature of the rectum from the early part of the century to the present, and just now it is at the height of its popularity. Like every other surgical procedure at that point of its history, it is perhaps also occasionally done when it were better to be content with less radical measures. As a result of a careful search among the statistics of this operation, Cripps[1] gives the following figures. Out of a total of sixty-four cases, eleven died as a direct result of the operation; six from peritonitis, one from cellulitis, and four from accidents incident upon any surgical interference. There is but little doubt that this mortality might be reduced by a more careful selection of cases, as in the six cases of death from peritonitis, the peritoneum was opened in three, and in the other three the disease reached fully three inches from the anus. The height to which it is safe to go in this operation cannot be definitely stated for all cases, the reflection of the serous coat upon the rectum being at a variable point. Fochier[2] reports a case in which he used the écraseur at twelve centimetres without harm, and Allingham,[3] who is always a safe guide, has seen all but the lower two inches of the bowel covered by peritoneum in a female, has opened into it in a male when not more than three and one-half inches were removed, and has

[1] Cancer of the Rectum, London, 1880, p. 166.

[2] Lyon Méd., Feb. 20, 1876.

[3] Diseases of the Rectum, Ed. of 1879, p. 275.

taken away fully five inches in a male without bringing it into view. We can only say that the danger increases with every line above three inches. In the fifty-three cases of recovery the subsequent history is unknown in sixteen, and in three more the diagnosis was so doubtful as to exclude them from the list. No case is worth much in the consideration of a question such as this where the diagnosis has not been verified by the microscope in competent hands; for there are non-malignant growths of this part, which, to the naked eye, strongly resemble cancer. We have then a remainder of thirty-four, in whom the disease returned in twenty; but of these twenty several were operated on a second time for a recurrence of the growth, or possibly for a small nodule which had not been removed at the first operation, and after this second operation remained free. This leaves, however, a total of twenty-three out of sixty-four operations in which the disease had not returned after an interval varying from a few months to over four years—a limit reached in three cases.

This is certainly an encouraging result for this disease, and the fact that undoubted cancer may be removed and not reappear for such a length of time is decisive. Some operators, however, report better results than these, and some have not been so successful. Curling[1] gives one case of removal of an epithelioma in which there had been no return in the rectum after seven years, though for one year there had been "a doubtful tumor of the pelvis." Velpeau and Verneuil each report cases in which the cure has seemed permanent, and Chassaignac gives several in which there had been no return after six years. Dieffenbach's thirty cases in which the patients lived many years without a return are generally looked upon with suspicion. Allingham,[2] on the contrary, considers the *partial* removal of the circumference of the bowel as unsatisfactory. In all of his thirteen cases in which he was able to follow the progress of the case for one year, there was either a return of the growth in the rectum or the glands in the groin became affected and there ensued disease in the internal organs. In four cases the disease did not return in the bowel but in the inguinal glands, proving that it was not due to an incomplete operation. With regard also to his ten cases of *total* extirpation he speaks very cautiously. He believes that a cure is very uncommon and not generally to be expected; and he does not commit himself even on the question of the prolongation of life. The mortality, as a direct result of the operation, is generally about twenty-five per cent.[3]

Since then, in certain cases, we are justified in expecting recovery from the operation itself and such a length of life as would not result where the disease left to its natural course, we may ask to what cases is it applicable?

[1] Diseases of the Rectum, Ed. of 1876, p. 164.

[2] Loc. cit., p. 277.

[3] Molliére, Traité des Maladies du Rectum et de l'Anus, Paris, 1877, p. 627.

what are the methods of its performance? and what the after results as regards the condition of the bowel? Unfortunately we rarely meet the disease at a stage when extirpation is justifiable, that is, when it is limited to a circumscribed spot within three or three and one half inches of the anus, when it is movable on the muscular coat, and has not invaded the deeper tissues, and before the neighboring glands are enlarged. Dr. L. A. Stimson's[1] study of cases is very valuable in this connection. He bases the prognosis as to immediate return far more upon such naked-eye appearances as these than upon the microscopic character of the growth. We should certainly not consider it advisable, as has recently been done, to attempt excision in a case where the peritoneum was deliberately opened in a woman, it being palpably impossible to extirpate the growth without cutting into that cavity. The prospect of prolonging life is not sufficient to compensate for the danger of immediate death, or of certain local return. The operation has once been abandoned and will certainly be so again unless it is kept within narrower limits than these.

There are many ways in which the rectum may be wholly or partially removed, but it does not fall within the scope of this article to describe them in detail. The knife, écraseur, elastic ligature, or the galvano-cautery may be used, and each operator has his favorite method. The rectum may be freely laid open by a deep, posterior, median incision as a preparatory step, and the two sides dissected up laterally from this as a starting point; or two elliptical incisions may be made surrounding the anus, and the dissection carried along the bowel from without inwards. The ligature and galvano-cautery are chiefly in favor as means of avoiding hemorrhage; but, though hemorrhage is one of the things to be looked after, the main requisite in controlling it is plenty of room, and this is best obtained by the posterior incision through rectum and anus nearly to the tip of the coccyx. This cut greatly facilitates the performance of the operation, and, moreover, allows free drainage subsequently. The accidents most to be feared are opening the peritoneum and wounding neighboring viscera, and in avoiding these, the advantages of a careful and, if necessary, deliberate dissection with the knife over the écraseur or cautery are manifest. In the female the recto-vaginal septum may be removed to a considerable extent without interfering with the good result, but a wound of the vesiculæ seminales or base of the bladder in the male is not so light a matter.

With regard to the condition of the parts after operation, two opposite conditions are to be feared, stricture and incontinence of feces. The former may be met by dilatation, and the latter is not a contraindication to the operation. Experience on this point is almost unanimous, Allingham

[1] A Contribution to the Study of Cancer of the Rectum, "Arch. of Med.," Aug. 1879.

being the only author who seems not to have had satisfactory results. It is certain that the whole sphincter muscle may be removed and the patient recover a comfortable degree of control over everything except fluid motions. This is due to the greater or less degree of contraction which always follows; to the action of the mucous membrane which may become more or less prolapsed and act as a valve; to the fact that a few fibres of the sphincter may have been left; to the thickening of the muscular tissue at the lower end forming a rudimentary sphincter; and to the physiological fact that the sigmoid flexure is the reservoir of feces, and that normally the rectum is an empty pouch, only filled at the time of defecation. Bearing this point in mind, it is easy to understand how the sphincter may be dispensed with, and no other explanation seems so well to account for what is an undoubted clinical fact.

The palliative treatment of cancer of the rectum is directed chiefly toward fulfilling three indications: 1. Relief of pain; 2. Overcoming obstruction; 3, Cleanliness. We shall consider each of these in its order. The pain in this affection depends on two classes of causes—those which make cancer a painful disease wherever met with in the body, and those which are due solely to its situation at the outlet of the bowel. Among the first, we have pressure upon adjacent parts and involvement of neighboring organs and nerves; and among the second, the passage of feces over an ulcerated surface and spasm of the sphincter muscle from irritation caused by its direct implication in the cancerous growth, or by the passage over it of irritating sanious discharges from the sore. From this it is easy to understand why cancer is in one person attended by excruciating suffering, while another may hardly be conscious of its presence; and why the pain is in some paroxysmal and particularly aggravated by a movement of the bowels, and in others dull and constant, radiating through the loins and down the thighs. For the relief of this symptom we have at our command: *a.* Regulation of the passage, diet, and the recumbent posture; *b.* Anodynes locally and by the mouth; *c.* Partial destruction of the growth by means of the curette, cauterization, or partial extirpation; *d.* Division of the sphincter; *e.* Lumbar colotomy.

The passages should be kept soft but not fluid, as any approach to diarrhœa always aggravates the suffering. This may be done partly by the choice of food, which needs to be regulated with great care on account of the tendency to gastric disturbance, more or less of which is always present; and by the administration of the mineral waters, which are generally sufficiently laxative for the purpose. Rest in the recumbent posture is a means of palliation of great value, sometimes giving more relief than anodynes. These latter may be given both by the mouth and in enemata, and if possible should be pushed to the point of relieving suffering. This seems so plain a duty which the surgeon owes to his patient that we need

not stop to discuss any possible moral bearing it may have. If the agony of this incurable malady could always be relieved by the administration of opium, the question of operative interference would arise much less frequently than it now does. But, unfortunately, the constant administration of this or any other narcotic will sometimes cause gastric and mental disturbance harder to bear than the disease. By using the finger-nail, a curette similar to the one used in the uterus, or a scoop such as is used for submucous uterine tumors, the pain may in some cases be greatly relieved by a removal of a part of the growth when of the soft variety. The same may be done by the application of chemically destructive agents or the actual cautery, and even by the partial excision of the mass, merely as a means of relief and where there is no question of cure.

In a previous paper[1] I have already called attention to division of the sphincter muscle as a palliative measure in the treatment of rectal disease, and have tried to show that the pain in malignant growths was often due in a great measure to its spasmodic action, and might be permanently relieved by its complete division. That the operation itself was devoid of danger, and that its results in proper cases fully equalled those of the more dangerous operation of lumbar colotomy, was also proved; and an attempt was made to reduce this operation, whose good results were first shown by the French surgeons, to a definite rank among the means at our control for the treatment of painful affections of this part.

I see that Allingham in his last edition, also adds his testimony in favor of the value of the operation, which may be performed in several ways, all having the complete division and paralysis of the muscle in view; and is absolutely indicated in all cases where the muscle is found firm, irritable, and inclined to spasm. In such cases the relief of suffering will sometimes be so great as to deceive the patient into the belief that his cancer has been radically cured, though it has not in reality been touched. There is a class of cases in which the sphincter will be found in a condition exactly the opposite of this—relaxed, patulous, admitting readily the larger blade of Sims' speculum. In such the disease will generally be found well up the rectum, and probably by its pressure has paralyzed the nerves which supply the muscle. Here the operation can give no relief.

We come now to the *dernier ressort* of surgery for the relief of pain—lumbar colotomy, and there are several points in connection with it which should be well borne in mind. We may ask, 1, to what cases is it applicable? 2, what is the danger to life in its performance? 3, what hope of prolonging life does it give? Taking these questions in their order, we should say it was applicable only to those cases in which the pain may reasonably be supposed to be entirely or in great part due to the direct

[1] Division of the Sphincter Ani Muscle as a Therapeutic Measure. New York Med. Journ., June, 1880.

contact of the feces with the diseased surface. There are such cases, and in them the operation accomplishes what no other means will, and the sufferer feels amply repaid for having submitted to it if he lives but a few weeks in comfort; but such cases are not common—not so common, we submit, as is the performance of lumbar colotomy. If one were to judge from the published reports of this operation which appear from time to time in the current journals, he might suppose that the mere diagnosis of a cancer of the rectum was in itself a sufficient reason why the sufferer should at once be furnished with an artificial anus. There could be no greater error, and the operation is often done without affording any relief, and perhaps in cases where such a result might have reasonably been anticipated. We have placed it last on the list of known methods of relieving pain, and have called it the *dernier ressort*, and such it is. When none of the other means we have mentioned serve to make life comfortable it is time to consider whether this one is likely to. As to the immediate risks of the operation statistics are difficult to obtain. Bryant, in fifteen cases for various diseases, gives one death from peritonitis, and two within the first three days, "the operation having been undertaken too late." Curling in twenty-one cases has had seven fatal results, two from chloroform, one in which peritonitis already existed, one from pyæmia, two from exhaustion, and one from a peritonitis which sprang from the disease and not from the wound. Allingham in twenty-seven cases has had no deaths which could properly be attributed to the operation; a fact probably due to the care with which his cases were selected. In fact such figures as these show better than would any elaborate tables the dangers of the operation. In properly selected cases the immediate danger is peritonitis, not a very great one, and, in addition. the accident of not finding the part of the bowel intended—a thing which has often happened to the best operators. If the operation is attempted when the patient is too weak to bear the anæsthetic, or is in the last stage of exhaustion, the mortality must of necessity be great. As to prolonging life, when the patient is in danger of immediate death from obstruction this may be done; also when death is imminent from the intensity of the suffering, a few weeks or months may be gained in which the cachexia shall run its natural course. But the average length of life in cancer of the rectum is not much over one year from the time the patient generally comes fairly under observation of the surgeon, and whether lumbar colotomy be done early or late the time when life shall yield to the gradually advancing cachexia will not be much affected.

For overcoming obstruction—the second indication in palliative treatment—we again find numerous means at our disposal. These may be grouped under the following general heads: 1, dilatation; 2, division; 3, destruction; 4, lumbar colotomy. Before commencing to treat the ob

struction as such, it is well to remember that an exceedingly small outlet to the alimentary canal may, with proper care, be made to answer all the calls of nature. We see this constantly in cases of stricture both simple and malignant, where the finger cannot be forced through the obstruction, and yet there is no retention; and in such cases by the judicious administration of laxatives life may be made so comfortable that the question of surgical interference shall be postponed indefinitely. When, however, dilatation becomes necessary, it should be of the gentlest kind. The cases of fatal accident from perforation of the bowel where the coats have been weakened by ulceration are already numerous enough to serve as warnings for all future time. The best of all dilators in cancerous disease is the finger, either that of the patient or the nurse, passed daily; and none of the mechanical means with which we are acquainted equals this for safety and comfort. If dilatation be found too painful or ineffectual, as it sometimes will, recourse may be had to division of the stricture.

Under the term rectotomy many different procedures are included,[1] such as nicking the stricture at one or several points; free division in the median line by a single deep incision either anteriorly or posteriorly or both; division of the stricture and of all the parts below, including the anus, with the knife, écraseur, or thermo-cautery (external rectotomy of Verneuil), etc. The latter is the most radical and the safest of all, for the reason that it permits free drainage and discharge of fluids. Instead of this, attempts may be made at opening a passage by the destruction of a part of the growth, as has been explained in speaking of the relief of pain.

There is no constriction within four inches of the anus which may not be overcome by some one or other of these means. What then remains for lumbar colotomy? Simply those above the reflexion of the peritoneum. We have tried to show with regard to this operation that it should be a last resort; that there are many simpler means at the hand of the surgeon for accomplishing what it is intended to accomplish; that it is at best simply a palliative measure, and one by no means devoid of danger; and that the cases in which it is likely to be justified by results may be selected with considerable certainty beforehand.

The last indication to be met is cleanliness, and this will be found necessary chiefly in those cases where from extensive ulceration the anus has been destroyed, and the whole rectal pouch converted into an open sore. There is nothing better perhaps as a disinfectant in such a case than a weak solution of permanganate of potash, or where the discharge contains much blood, one of the usual astringents.

[1] See article by author in N. Y. Med. Jour., March, 1880.

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